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ABSTRACT

This study explores the relationship between the sex of the teacher and second-, third-, and fourth-grade students' classification of school-related objects as either masculine or feminine. Subjects, 789 students representing a cross-section of racial and ethnic groups in Chicago suburban schools, were equally divided between grades and according to whether they had male or female teachers. All the students were administered an instrument which included 10 items teachers thought students would perceive as school-related. A three-way analysis of variance model was used, and the following conclusions were drawn: (1) Girls view school as more sex congruent than boys in grades 3 and 4. (2) No relationship exists between the sex of the teacher and the way in which second-, third-, and fourth-grade boys label school-related objects, but male teachers had a negative effect on girls. (3) The classification of school-related objects does differ by grade when the child's sex is separately considered. (4) Male teachers had no significant effect on students' labeling of school-related objects. (Author/RH)

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ABSTRACT

ANALYSIS OF THE EFFECT OF TEACHER SEX
ON SEX ROLE CLASSIFICATION
OF SCHOOL RELATED OBJECTS

This study was designed to explore the relationship between the sex of the teacher and the way in which second, third, and fourth grade students label school-related objects.

The subjects were 789 second, third, and fourth grade students from schools from suburban Chicago schools. The children were equally divided between grades, between male and female teachers and represented a cross-section of racial and ethnic students in the area. All the students were given the school-related objects instrument in May of 1981. A three-way analysis of variance model was used.

From the analysis of the data the following conclusions were drawn: (1) Girls view school as more sex congruent than boys in grades three and four. (2) There is no relationship between the sex of the teacher and the way in which second, third, and fourth grade boys label school-related objects, but male teachers had a negative effect on girls. (3) The classification of school-related objects does differ by grade when investigated by the child's sex separately.

This study found similar results as did other research regarding students' labeling of school-related objects. In addition, this study added to research information that male teachers had no significant effect on students labeling school-related objects.

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ANALYSIS OF THE EFFECT OF TEACHER SEX ON SEX ROLE CLASSIFICATION OF SCHOOL RELATED OBJECTS

James Cunneen and Charles A. Sloan

By the age of seven students are able to classify objects as either masculine or feminine (Kahlberg, 1966). At this time they are also beginning their full participation in school. Several studies dealing with classificaiton of school-related objects have been conducted with students at this age and older. There have been three major studies on sex role identification of school-related objects. In 1964 Kagan studied 240 second grade students and 65 third grade students on how they labeled eight school-related objects. He caught them three nonsense symbols: one for male, one for female, and one for both. He asked the students to apply these symbols to the objects. Kagan found that girls labeled the school-related objects female more often than boys labeled the objects male. Kellogg (1969) was interested in several aspects of Kagan's study which he believed needed further investigation. First, he wanted to test Kagan's findings in a different setting. Second, he thought it was a questionable practice to require children to learn nonsense sumbols. He also felt that a meaningless label might interfere with what the child was thinking or saying to himself. Kellogg studied the third and fourth grade students by asking them who would use the objects more, boys or girls. Kellogg concluded that girls labeled school-related objects female more than boys labeled the objects male. This conclusion agreed with Kagan's earlier study.

Hill (1974) decided to measure the difference in children's attitudes from entrance into school until fourth grade. She utilized Kellogg's approach of direct labeling of objects. Hill studied kindergarten, second and fourth grade students. She asked the students who used ten school-related objects most, a boy or a girl. Her data supported conclusions that girls view school-related objects as more

congruent to their own sex role; whereas boys are more ambivalent. In her developmental data Hill found girls marked school related objects feminine more as they progressed in school. She found the opposite result with boys. Hill stated that fourth grade boys were becoming increasingly ambivalent to the sex role identification of school related objects. Both Kellogg and Hill recommended that another investigation focus on the effect that male teachers might have on children's labeling of school-related objects.

This study sought to analyze the relationship between the sex of the teacher and the way in which second, third, and fourth grade students label school related objects. Since researchers examined the difference in grade levels of children labeling school related objects the current investigation extended earlier studies by analyzing the influence that male teachers have on children labeling school-related objects.

Methods and Procedures

The subjects were 789 second, third, and fourth grade students from suburban Chicago schools. The children were equally divided between grades, between male and female teachers and represented a cross-section of the racial and ethnic students in the area.

All of the students were given the school-related objects instrument in May of 1981. The test included ten items selected by second, third, and fourth grade teachers as objects that the students would perceive as school-related objects. After the students completed the instruments, a sex congruent score was established for the ten school-related objects that the child marked the same as his or her own sex. A three-way analysis of variance model was used.

Results

The main effect of the analysis of variance (Table 1) can be summarized as outlined below. First, teachers did not have a significant effect on students labeling school-related objects. Also, the effect of grade level was not significant. The only main effect that was significant was child sex. Girls label school-related objects female more than males label objects masculine.

Insert Table 1

The first simple effect was the difference between the sex of the teachers for boys (Table 2). The mean for male teachers teaching boys did not significantly differ from the mean of female teachers teaching boys. These results refute the hypothesis of Kellogg and Hill that male teachers would have a significant influence on the way in which boys label school-related objects.

The second simple effect under teacher sex - child sex was the difference between the sex of the teacher for girls. In this case the means were significantly different.

Insert Table 2

The third simple effect (Table 3) compares the means of second grade students taught by male teachers. The male teachers' mean was statistically different from the mean score observed for the female teachers. Second graders label more school-related objects sex congruent when taught by males than when taught by females. This significance was not found in the differences of means between the sex of the teacher in third and fourth grade.

The fourth simple effect, which was students taught by male teachers compared across grades two, three, and four, was not statistically different. However, the

difference between the students taught by females in second, third, and fourth grade was statistically significant.

Insert Table 3

The fifth simple effect investigated whether the differences between boys' means in second, third, and fourth grades were significantly different. The simple effect of grade for boys was significant at the .05 level (Table 4). Also the means for boys decreased from grade two to four. The difference between means for girls by grade level was also significant at the prescribed level. For girls the mean score increased from grades two to four.

Insert Table 4

Discussion and Conclusions

The present study concurred with the results of previous studies dealing with the masculine/feminine classification of school-related objects. The data indicated that the one significant main effect was child sex. These findings concurred with the findings of Kagan, Kellogg, and Hill. The statistical results are a strong statement that girls perceive school-related objects as more congruent with their own sex than boys. This statement is important because this study utilized a larger sample than earlier research. The one simple effect that involved child sex that was not significant was in second grade. It appeared that there was no difference between males and females in second grade, but the difference does become significant in third grade and intensifies in fourth grade.

The literature revealed that although boys and girls have the same ability in school, boys have more academic problems. Kohlberg's assertion on sex role

identity is that a person develops a process of valuing from self-categorization. This assertion was tested by Stein (1971) and Dwyer (1974) and found to be true. They found that children react favorably to objects congruent with their own sex. By combining those statements with the results of the present study, one could conclude that girls value school more positively than boys.

Kellogg and Hill et al. both hypothesized that male teachers might significantly effect the way in which boys label school-related objects. The data found in this study does not substantiate that notion. This study contributed to research information since Kellogg and Hills' hopothesis had not been statistically tested.

There have been a number of educators who have wanted more male teachers in the lower elementary grades. The result, that male teachers had no effect on boys and a negative effect on girls, would indicate that as far as labeling school-related objects is concerned there is no pressing need to place more male teachers in lower elementary grades.

The congruency scores of the girls on the survey increased as they progressed through the grades. In second grade the average total congruency score was slightly over 5.0; however, by fourth grade it had increased over two points. Boys had just the opposite results. In second grade, boys scored their highest congruency score, and the score decreased as the boys progressed to grade four. These findings concurred with Hills' findings. Obviously, some factor is influencing both boys and girls in these grades. It is a negative factor for boys and a positive one for girls. The present study has already eliminated the sex of the teacher as a possible factor.

This study found similar results as did other research regarding students' labeling of school-related objects. The predominant conclusion of this study is that it added to research information that male teachers had no significant effect

on students labeling school-related objects.

References

Dwyer, C. "Influence of Children's Sex Role Standards on Reading and Arithmetic Achievement." Journal of Educational Psychology, 66 (1974), 811-96.

Hill, C., M. Hubbs, and C. Verble. "Developmental Analysis of the Sex Role Identification of School Related Objects." Journal of Education Research, 67 (1974), 205-6.

Kagan, J. "The Child's Sex Role Classification of School Objects." Child Development, 35 (1964), 1051-55.

Kellogg, R.L. "A Direct Approach to Sex Role Identification of School Related Objects." Psychological Reports, 27 (1969), 839-41.

Kohlberg, L. "A Cognitive-Developmental Analysis of Children's Sex Role Concepts and Attitudes." The Development of Sex Differences, ed. E.E. Maccoby. Stanford: Stanford University Press, 1966.

Stein, A.H. "The Effects of Sex Role Standards for Achievement and Sex Role Preference on Three Determinants of Achievement Motivation." Developmental Psychology, 4 (1971), 219-31.

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TABLE 1

ANALYSIS OF VARIANCE, SEX CONGRUENCY WITH TEACHER SEX - CHILD SEX AND GRADE

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects					
T Sex	.556	1	.556	.204	.651
C Sex	299.022	1	299.022	110.063	.001
Grade	3.219	2	1.610	.592	.5553
Residual	1923.52	708	2.717		
Total	2413.56	719	3.357		

Note: Level of Significance was .05.
T = Teacher Sex
C = Child Sex

TABLE 2

SIMPLE EFFECTS ANOVA, TEACHER BY CHILD-CHILD BY TEACHER

Source	S.S.	D.F.	M.S.	F.	
	Teacher by Child				
Teacher for boys	6.944	1	6.944	2.56	n.s.
Teacher for girls	13.611	1	13.611	5.01	*
	Child by Teacher				
Child for male	81.567	1	61.567	30.02	*
Child for female	236.780	1	236.780	87.15	*

S.S.= sum of the differences squared.
D.F.= degrees of freedom
M.S.= sum of the differences squared/degrees of freedom
F. = M.S./Error term of 2.717
* = significant at the .05 level

TABLE 3

SIMPLE EFFECTS ANOVA, TEACHER BY GRADE - GRADE BY TEACHER

Source	S.S.	D.F.	M.S.	F.	
		Teacher by Grade			
Teacher Grade 2	11.695	1	11.695	4.30	*
Teacher Grade 3	4.009	1	4.009	1.47	n.s.
Teacher Grade 4	7.273	1	7.273	2.68	n.s.
		Grade by Teacher			
Grade for Male	8.189	2	4.099	1.48	n.s.
Grade for Female	17.502	2	8.751	3.22	*

S.S. = sum of the differences squared
D.F. = degrees of freedom
M.S. = sum of the differences squared/degrees of freedom
F. = M.S./Error term of 2.717
* = significant at the .05 level

TABLE 4

SIMPLE EFFECTS ANOVA, CHILD BY GRADE - GRADE BY CHILD

Source	S.S.	D.F.	M.S.	F.	
	Child by Grade				
Child Grade 2	.69	1	.69	.256	n.s.
Child Grade 3	182.88	1	182.88	47.625	*
Child Grade 4	268.20		268.20	69.843	*
	Grade by Child				
Grade for Boys	56.506	2	28.253	10.4	*
Grace for Girls	87.200	2	43.600	16.5	*

S.S. = sum of the differences squared
D.F. = degrees of freedom
M.S. = sum of the differences squared/degrees of freedom
F. = M.S./Error term of 2.717
* = significant at the .05 level